



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/773,290

02/09/2004

Junichi Yamada

Q79663

8732

23373

7590

07/21/2004

SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

PHAM, LY D

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 07/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/773,290	YAMADA, JUNICHI	
	Examiner	Art Unit	
	Ly D Pham	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 16-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/211,378.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>020904</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of claims 12 – 15 in the reply filed on June 28, 2004 is acknowledged.
2. Claims 1 – 11 and 16 – 36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 28, 2004.
3. Claims 1 – 11 are drawn to invention filed in parent application 10/211,378. Applicant is suggested to cancel these claims to avoid double patenting situation if these claims remain pending for the current prosecution.
4. Claims 12 – 15 are presented for the examination.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama et al. (US Pat Pub 2004/0022249 A1), in view of applicant's admitted prior arts.

Regarding **claim 12**, applicant's admitted prior arts teach a semiconductor memory including memory cell arrays constituted of a number of memory cells arranged in the form of a

Art Unit: 2818

matrix having a number of rows and a number of columns (fig. 22, memory cell array 2204), a defective memory cell relief means (fig. 22, 2203 and 2206) wherein the memory cell arrays include main memory cells arranged in the form of a matrix having a number of rows and a number of columns (fig. 24, horizontal rows and vertical columns), at least one row of substitution information storing memory cells (fig. 23, 2302) and at least one column of redundant memory cells (specification page 3, lines 18 – 27, substitution in unit column).

Although applicant's admitted prior arts did not further teach the semiconductor memory including first and second memory cell arrays wherein the substitution information for the first memory cell array being stored in the substitution information storing memory cells in the second memory cell array and vice versa, however, the feature has been shown by Katayama et al. (fig. 6 shows different memory arrays 52, referred to as block groups, and in claims 8 and 73, storing in the second group of blocks the characteristics of the first group of blocks, including defect indication and substitute address whether there is a defect in the first block group).

Therefore, it is considered obvious to one of ordinary skill in the art, at the time the invention was made, to include the feature shown by Katayama et al. to the admitted prior arts shown by applicant, so that faulty memory is prevented from being used (paragraph 0004).

Regarding **claim 13**, Applicant's admitted prior art also show the substitution information storing memory cells are non-volatile (specification page 1, lines 15 – 18).

Regarding **claims 14 and 15**, Applicant's admitted prior art further disclose the main memory cells, the redundant memory cells, and the substitution memory cells being non-volatile memory cells (specification page 4, lines 12 – 15), the non-volatile memory cell is ferroelectric non-volatile (specification page 3, lines 7 – 17).

*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See also cited reference JP 2001273798 A, "A test unit makes the second block area automatically store a defective block address information when a defect is detected in a first block area during the test mode."
8. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02(b)).
9. Any inquiry concerning this communication on earlier communications from the examiner should be directed to Ly Pham, whose telephone number is **571-272-1793**. The examiner can normally be reached on Monday – Friday from 8:30am to 5:00pm, alternate Friday off. The examiner's supervisor, David Nelms, can be reached at **571-272-1787**. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Ly Pham



July 16, 2004



David Nelms  
Supervisory Patent Examiner  
Technology Center 2800